Engaging College of ACES Faculty to Reflect on the Practice of Teaching

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Abstract

This project was conducted under the auspices of the Academy of Teaching Excellence in the College of Agricultural, Consumer and Environmental Sciences (ACES) to strengthen and promote excellence in instruction. There were three phases of this project that engaged teaching faculty, academic professionals, and administrators to reflect on solving problems of teaching practice: (1) Case Study of Exemplary Teachers; (2) College-Wide Reflection on Teaching Survey; and, (3) Professional Development Seminar and Teaching Circle.

In the case study, two of the 14 characteristics that described what exemplary teaching professors’ cognition, motivation, and practice emerged as most salient: (1) They internalized content into a set of concepts that they could clearly communicate to students and help them assimilate into their cognitive structures, and (2) they cared about students and their teaching responsibilities. In the college-wide survey, teaching faculty and academic professionals in the College of ACES taught an average of 36 (SD = 59.44) students for fall and spring semesters with 8 (SD = 7.39) contact hours per week. The teaching faculty and academic professionals in the College of ACES had an average of 14 years (SD = 9.74) of teaching experience in higher education, of which 10 years (SD = 8.79) were in the College of ACES. A majority of teaching faculty and academic professionals rated teaching for thinking, motivating students, using a variety of teaching strategies and approaches, and utilizing instructional technology as their greatest needs for professional development. Further, the three greatest challenges of teaching faculty and academic professionals in the College of ACES are: student motivation; time and balancing job responsibilities; diversity of students’ learning styles, educational preparation, and backgrounds. Overall, 176 faculty, professional staff, and administrators reflected on teaching and learning in the College of ACES through the case study, survey, and professional development seminars.

Project Summary

The project summary discusses the activities and results for the three phases that addressed the four objectives of the project, strengths and weaknesses of the results, how the plan was implemented, and ways that the plan might be replicated or improved.

Activities and Results

A Case Study of Exemplary Teachers (Objective 1)

A collective case study entitled, *What Do Exemplary Teaching Professors Do? Understanding the Practice of Exemplars*, was conducted to identify the characteristics of exemplary teachers in the College of ACES during the spring semester 2003. The
The purpose of this case study was to understand the professional practices of exemplary teaching professors and theorize what exemplary teachers do as teachers in the College of ACES.

Exemplary teaching faculty nominations were solicited from student club leaders. 13 of 26 student clubs responded representing each of the seven departments in the College of ACES. The Incomplete List of teaching faculty in the College of ACES was secured. The list of teaching faculty who received Excellence in Teaching awards from the College of ACES Academy of Teaching Excellence was obtained from the office of Academic Programs in the College of ACES. These lists were cross-referenced to identify the exemplary teaching faculty within the College of ACES. College administrators, who were experts on teaching and learning, verified the list of exemplary teachers. A total of thirty-two (32) teaching faculty were identified and invited to participate in the case study.

Twenty-seven tenure-track professors participated in one of four, two-hour focus group interviews. During the focus group interview, professors drew concept maps of their mental picture of teaching and learning, and answered three broad questions intended to invoke thought and reflection of exemplary college teaching. They were asked; what makes an exemplary college teacher, what motivates you to teach and what makes you an exemplary college teacher. Twenty-six professors participated in individual one-to-one interviews intended to probe deeper and identify what makes these professors exemplary. The exemplary professors were asked to describe themselves as a teacher, what made them different from non-exemplary teaching professors, their greatest joys, the best thing about teaching, how they challenged students to think and learn the content, how does their teaching help students learn, how do they continue to remain exemplary, what are their goals for improvement, and what have been their greatest challenges in their evolution as a college teacher.

The twenty-seven exemplary teaching professors represented a range of academic disciplines within the College of ACES: 7 (26%) were in animal science; 6 (22%) were in agricultural and consumer economics; 4 (15%) were in natural resources and environmental sciences; 3 (11%) were in agricultural engineering; 3 (11%) were in human development, family studies, and agricultural education; 2 (7%) were in crop sciences; 2 (7%) were in food science and human nutrition. Four (15%) were untenured assistant professors, 10 (37%) were tenured associate professors, and thirteen (48%) were tenured professors. The professors taught an average of 17 years, ranging from 5 to 34 years.

Evidence from professors’ concept maps of teaching and learning, focus group interviews, and face-to-face interviews were gathered and analyzed. The researchers’ collected and interpreted the data using qualitative methods from an interpretivist stance. Interviews were audio taped and transcribed. Coding was used to analyze the qualitative data from the concept maps and open-ended questions. The researchers created a coding scheme of the major concepts, central ideas, or related responses. Trustworthiness and believability was established through the use of data source, investigator, theory, and
methodological triangulation; peer debriefing, an audit trail, and a reflexive journal. Nineteen characteristics of exemplary teachers in the College of ACES were identified. The 14 characteristics emerged as themes from the focus group and individual interviews and were grouped into three domains of characteristics: cognitive, affective-motivational and teaching practices.

**Five cognitive characteristics** were identified to describe how exemplary teaching professors thought about teaching and learning: An emphasis on context and relevance, applying knowledge, learning concepts, differentiating instruction, and reflecting on their teaching.

**Context & relevance**—The professors used real-life examples, examples that were meaningful to students, and stories or humor. A representative quote of this theme is, “One of my basic philosophies is that if students can relate to something then they can remember it. I pick and choose, based on their backgrounds to fit in information that they will remember.”

**Applying knowledge**—The exemplary professors’ students were encouraged to analyze issues related to the discipline, make decisions, solve problems, and learn by doing. A representative quote of this theme is, “I have an Extension, research, and teaching, which are called appointments from hell. The beauty of it that I have research and real-world examples from producers that I can take back to the classroom. One day, I took a question that I had on the phone and wrote an exam question up and put it on the exam.”

**Learning concepts**—The professors noted teaching only about the major concepts and leaving out minor details and discrete bits of information, the importance of showing students inter-relatedness of concepts, and helping students create mental pictures to learn concepts. A representative quote of this theme is, “I’ve become less concerned with the body of knowledge and more concerned with the fact…that it is something that they will try to remember and use at some point in the future.”

**Differentiated instruction**—The professors sought to understand where students were in knowledge of subject, recognize different learning styles or ways of learning the information, maintain flexibility in the learning environment, use a variety of modalities for instruction, and use multiple examples in instruction. A representative quote of this theme is, “Our students have changed in the last 20 years. I went through this huge transformation in the last 15 years with the kinds of students that I have had in class: farm background and the sex of our students. Being able to adapt to the students that we have had is the key.”

**Reflection**—The professors sought new ways to teach students, were life-long learners about the teaching process, monitored learning and made instructional decisions accordingly, and sought to continuously improve the practice of teaching. A representative quote of this theme is, “...I didn’t really know why things work, why things didn’t work. That’s a big evolution; learning more about the theory behind the practice, so...what I do is a lot more thoughtful.”
Five affective-motivational characteristics were identified to describe how exemplary teaching professors felt about their students and learning and what motivated them to teach: Caring and personal disposition; motivated by student affirmation and feedback; valued student success; had a positive regard for students; and had self-imposed standards of professionalism.

Disposition/affect — The exemplary professors were personable, caring, and empathetic. A representative quote of this theme is, “I think you have to let the student know that you enjoy what you are doing and that you enjoy them.”

Student affirmation/feedback — The professors were motivated by student praise and student learning. A representative quote of this theme is, “When a student comes back and says…that was the best course I had…when you get a little acknowledgment that says, ‘You have made a difference.’”

Student success — The professors valued student growth and development as professionals and people and impacting student success. A representative quote of this theme is, “The number one focus is the student….and have an interest not only in this class but how they do in the long-run in agriculture.”

Positive regard for students — The exemplary professors valued students as bright and motivated, as individuals who could uniquely contribute to the learning environment, and they valued relationships and interactions with students in a co-learning environment. A representative quote of this theme is, “I enjoy the students…they are in a really great time of life. The world is so new and fun for them to be here in college and see the things they have never experienced before.”

Professionalism — The teaching professors communicated a desire to excel as educators, remain current with disciplinary knowledge, educate future professionals in the discipline, instill an appreciation of the discipline, and a passion for the subject itself. A representative quote of this theme is, “I think it is important for administrators to realize that just as research programs evolve, teaching programs should evolve.”

Four teaching practice characteristics were identified regarding how exemplary teaching professors described how they motivated students and made them think critically. The exemplary teachers talked about their teaching practice in terms of planning, interpersonal, communication, and assessment skills.

Planning skills — The professors knew objectives and/or outcomes, had a plan for what and how to teach, and prepared resources in advance. A representative quote from this theme is, “Planning is how you can help students remember it [content], and how you connect to what they already know. That’s what planning is. Planning is not sitting down and developing a PowerPoint presentation. That’s mechanics.”

Interpersonal skills — The exemplary professors learned students’ names, backgrounds, and experiences, used humor and stories from personal experience, were accessible or
had an open-door policy, listened to students’ needs. A representative quote from this theme is, “I am willing to put myself on the line and do something that is a little socially risky. It makes me vulnerable and makes me human. Sometimes I do great and sometimes I make a mistake. There is an opportunity there to make connection over that. In that process there is a little self-deprecating humor and so that starts that moment of connection and bonding.”

Communication skills—The professors delivered content in an organized and logical fashion, with real examples, in multiple ways, repeatedly, communicated expectations clearly, and gave clear explanations. A representative quote from this theme is, “I am trying to be very aware of the fact that I am dealing with novices and they can’t swallow it at the rate that I am capable at the rate that I can deliver it.”

Assessment skills—The professors monitored for student understanding both formally and informally, gave feedback, conducted formative and summative self-assessments of teaching. A representative quote from this theme is, “So I work at being patient and going slow, staying in touch with them and connecting with them and using my observational skills to tell me where I am at and often asking them lots of questions.”

Three conclusions summarize the findings. First, exemplary teaching professors internalized content into a set of concepts that they could clearly communicate to students and help them assimilate into their cognitive structures. Their mental images of teaching were shaped by their professional discipline and they integrated their research and/or Extension appointments to complement their teaching. The teachers synthesized the content of the courses that they taught into a set of key concepts, and focused on engaging students to learn the concepts in meaningful ways. Coverage of material in a particular course was second to un-coverage of concepts that students could internalize and transfer to new settings.

Second, exemplary teaching professors cared about students and their teaching responsibilities. Professors shared how they invested time and energy to do the best job of teaching they could. They were intrinsically motivated to teach and found satisfaction through various means of student affirmation, feedback and success. Many of the professors expressed that teaching was valued second to research by the university rewards system. Several professors recognized that they sacrificed research and personal time for teaching, yet they did not regret doing so because of the difference they believed they made in the lives of their students. Professors felt ethically and morally responsible to do the best job they could because they considered themselves as professional teachers and professionals within their academic disciplines.

The final conclusion that emerged from the findings of this case study were manifestations of how excellent teaching professors think and feel about teaching. Cognition, motivation, and practice appeared to be interdependent because moral behaviors are produced by how people think, what they value, what motivates them, and how they perform.
A survey to determine the problems of teaching practice of faculty members in the College of ACES was conducted during the fall semester 2003. All participants must have taught during the 2002-2003 academic year, be currently teaching in the College of ACES. A total of 242 faculty and academic professionals in the College of ACES were included in the survey. Forty-five percent (N = 109) of the faculty within the College of ACES completed the web-based survey. Thirteen faculty members responded to the survey but for one reason or another did not complete the survey. Fifty percent of the faculty and academic professionals responded to the survey of teaching in the College of ACES.

The collective case study and a thorough review of literature provided the basis for the creation of the survey instrument. The participants responded to 5 open-ended questions such as; what do you do well as a teacher; what motivates you as a teacher; what are the greatest challenges you have about teaching; when you find yourself thinking about teaching, what do you think about; and why do you use the teaching strategies or approaches you use in your instruction. The participants also answered 8 closed-ended questions such as: rank the teaching roles in the order you value them most; rate the professional development needs you have as a teacher; rate how often you use these teaching strategies and approaches; and how many years have you taught in the College of ACES, higher education, as a teaching assistant or post-doctoral instructor, and outside of higher education. Validity was established through a field test and extensive reviews and consultations with experts on teaching and learning.

The questionnaire was created in two forms, a web-based version and a paper version. The web-based questionnaire allowed for easy entry of the qualitative data and provide as an easy medium of communication between the researchers and the busy teachers. A paper version of the questionnaire was made available to the participants upon their request. A pre-notification was sent out by the Dean of Academic Programs for the College of ACES encouraging participation in the survey. The seven departments in the College of ACES were contacted and time was scheduled at five departmental meetings to announce the survey and answer questions about the up-coming survey of teaching in the College of ACES.

All available academic year 2002-03 course and enrollment information was obtained from the University Department of Management Information (DMI). The DMI information was manually entered into the web-generated database allowing the researchers to limit the questionnaire to 13 open and closed questions taking approximately 20 minutes to complete. The initial survey, Reflecting on Your Teaching, was emailed out followed by four follow up reminders to the non-respondents and incompletes. Upon completion of the web-based questionnaire the participants received an immediate note of appreciation. The closed-ended questions was compiled into a database and analyzed using a computerized spreadsheet. Frequencies, means, and standard deviations were reported. The open-ended questions were entered into a word processing program and coded for themes using a post-positivist stance.
Faculty and professional staff in the College of ACES taught an average of 36 (SD = 59.44) students fall and spring semesters. The average instructional units conferred per faculty and professional staff in the college for fall semester is 90 (SD = 124.54) and spring semester is 89 (SD = 119.59). Faculty and professional staff within the College of ACES spend on average 8 (SD = 7.39) contact hours. The faculty and professional staff have been in the College of ACES an average of 10 (SD = 8.79) years. The faculty and professional staff have been teaching in higher education for an average of 14 (SD = 9.74) years and taught as a teaching assistant or post-doctoral instructor an average of 2.19 (SD = 2.93) years. Faculty and academic professionals taught an average of 1.15 (SD = 3.79) years outside of higher education (public schools, community-based education).

Table 1.
Percentages of Professional Development Needs of Faculty and Academic Professionals (N = 107)

<table>
<thead>
<tr>
<th>Professional Development Needs</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
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<tr>
<td>1. Teaching for Thinking...............................................</td>
<td>10</td>
<td>20</td>
<td>29</td>
<td>28</td>
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<td>2. Motivating Students..................................................</td>
<td>13</td>
<td>22</td>
<td>30</td>
<td>23</td>
<td>12</td>
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<td>3. Using a Variety of Teaching Strategies and Approaches............</td>
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<td>23</td>
<td>41</td>
<td>17</td>
<td>11</td>
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<td>4. Utilizing Instructional Technology..................................</td>
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<td>24</td>
<td>33</td>
<td>13</td>
<td>11</td>
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<td>5. Accommodating Student Differences..................................</td>
<td>24</td>
<td>41</td>
<td>24</td>
<td>7</td>
<td>4</td>
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<tr>
<td>6. Dealing with Student Problems and/or Classroom Management........</td>
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<td>44</td>
<td>13</td>
<td>2</td>
<td>4</td>
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<tr>
<td>7. Developing Tests and/or Assessments..................................</td>
<td>28</td>
<td>34</td>
<td>26</td>
<td>11</td>
<td>1</td>
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<tr>
<td>8. Developing a Syllabus and Course Design............................</td>
<td>41</td>
<td>29</td>
<td>18</td>
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<tr>
<td>9. Other (N = 18).............................................................</td>
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<td>0</td>
<td>0</td>
<td>43</td>
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</tr>
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Note. Scale: 1 = Not at All Needed; 2 = Slightly Needed; 3 = Somewhat Needed; 4 = Frequently Needed; 5 = Most Needed.

A majority of teaching faculty and academic professionals rated teaching for thinking, motivating students, using a variety of teaching strategies and approaches, and utilizing instructional technology as their greatest needs for professional development (Table 1). A majority of teaching faculty and academic professionals did not feel they needed professional development on: accommodating student differences, dealing with student problems and/or classroom management, developing tests and/or assessments, and developing a syllabus and course design. Fourteen participants suggested other
professional development needs such as a university emphasis on teaching, peer-based evaluation systems, recognition for outreach and adult education, and strategies for active learning.

The participants were also asked, “What are the greatest challenges that you have about teaching?” Ranked by frequency, the themes are: (1) student motivation, (2) time (not enough time to prepare; difficulty balancing with research and outreach/service), (3) students diverse learning styles and educational preparation or background, (4) remaining current with the course content, (5) communicating content, (6) extending the students’ thinking, (7) lack of university support, (8) reaching and inspiring students for lifelong learning, (9) self improvement, and (10) teaching concepts for student understanding. Other themes that emerged as challenges the participants have about teaching such as; large class sizes, use of technology, lack of facilities outfitted with instructional tools, student engagement, lack of student study skills, evaluating learning and interacting with students personally. Other themes of less frequency are; grading, class management, financial support, validity of ICES scores, and helping students develop a global view of the content.

Professional Development Seminar and Teaching Circle (Objective 3 and 4)

A seminar was conducted, in conjunction with the ACES professional development office, to engage faculty in the College of ACES and to report the results of the collective case study. Thirty-three faculty, academic professionals, and administrators ate lunch and watched a presentation of the case study that was followed by a question and answer session. The seminar provided the opportunity for participants to reflect on their teaching abilities related to exemplary teaching practices and reflect on their challenges and concerns for teaching in the College of ACES.

The case study also provided the main topic of an ACES Teaching Circle discussion providing the opportunity for faculty and administrators to discuss the results from the collective case study. One associate dean, two department heads, and four faculty members attended the Teaching Circle. The scholarly discussion focused on the results of the case study and ways to validate our exemplary professors. Thought-provoking questions guided the discussions and provided means for reflection such as: what evidence is there to show for exemplary teaching, how do we know that a professor is an exemplary teacher, and can you identify an exemplary teacher when you see them.

Engaging junior faculty members enrolled in the Teaching College to reflect on their beliefs and think about solving the ill-structured problems associated with teaching was one part of the objective not completed due to time and budget constraints. The research assistant working on this project became interested and plans to do a research project this spring semester that will engage all junior faculty to think about their teaching beliefs and problems of practice.
Strengths and Weaknesses of the Results

Strengths

This study contributed to the knowledge base on the practice of exemplary teaching professors by exploring the thinking, motivation, and tasks of exemplars. The findings from this study could inform universities to facilitate professional development, reflection, and discussions about disciplinary knowledge and pedagogy for new professors.

The information obtained from this collective case study is being shared with other colleagues and associations that have interest in exemplary college teaching. One research paper has been accepted by peer-review for presentation at the 2004 annual meeting of the American Educational Research Association. Other manuscripts have been submitted for peer-review to *The Review of Higher Education* and the National Agricultural Education Research Conference.

A presentation regarding this project is scheduled to engage faculty from across campus to reflect on their teaching at the University of Illinois, Urbana-Champaign Scholarship of Teaching and Learning Reading Group. The design of this collective case study allowed representation of the vast array of proven teaching methods. This study resided in the qualitative interpretivist paradigm so that we may better understand the exemplar professors in the College of ACES and their many ways of teaching.

The web-based survey provided an easy means of disseminating the survey and allowed the faculty and academic professionals to simply complete and submit the survey. Because the survey was online the data entry was done automatically when the participant submitted the survey. The web technology allowed us to easy ask and automatically enter open-ended questions.

The professional development seminar was well attended by interested and devoted faculty and academic professionals. The seminar provided a safe environment for the participants to interact and reflect on their teaching abilities related to exemplary teaching practices and reflect on their challenges and concerns for teaching in the College of ACES. The seminar set the stage and became a catalyst for the college wide survey that soon followed.

The graduate research assistant for the project became highly immersed in the literature on faculty development, and was motivated to reflect on his own thinking about faculty needs and the problems of practice of teaching in higher education. As a result, this GRA plans to conduct his Master’s thesis regarding such issues with junior faculty members. All junior faculty in the college will be interviewed and engaged to reflect upon the unique problems of practice experienced by junior faculty who have teaching appointments.
Finally, the two junior faculty members as co-PD’s of this project became highly engaged to reflect upon their own teaching as a result of listening to exemplars talk about effective practice. Both faculty members modified their own courses to reflect effective practice, and both saw a significant increase in their fall semester ICES scores as compared to last semester, before the project began. The junior faculty members also became more engaged within the college of ACES community of scholars as a result of their interactions with faculty members. One co-PD, created a college of ACES Teaching Circle as a result of this engagement. Both co-PDs are now working with ACES faculty members on SoTL projects as well. As such, this project improved the co-PD’s practice and scholarship of teaching.

Weaknesses

There were several weaknesses of this project. First, five people who were invited to participate in the exemplary teacher case study did not attend the focus group interviews. Two of these people have received national recognition for their teaching. Second, one of the professors who attended a focus group interview was not able to participate in the follow-up one-on-one interview. Third, there were limitations in identifying the exemplary teachers. Although the researchers used criteria based on scholarship of teaching, the researchers wanted to have nominations from teaching senior faculty colleagues and departmental chairs, but the Institutional Review Board did not accept this procedure due to promotion and tenure implications. Further, the student clubs favored undergraduate students, and the incomplete list of ICES evaluation rankings has received mixed reviews by faculty. Although the selection process was not without fault, it was deemed valid based upon a review of literature and it was systematic in nature.

Although technology was a major advantage in the timeliness and of administrating this survey, the technology also had its drawbacks. Each time an email was sent out about six percent were returned as undeliverable do to insufficient address, incorrect address or full mailboxes. There were several participants who could not remember user names and passwords to enter the survey. Some NetIDs were expired and several participants were unwilling or unable to update NetIDs to gain access to the survey. The web-based survey had a 45% usable response rate. Time to complete the survey could be a weakness of a qualitative web-based survey. One participant in particular responded that he had no time to complete a survey of this type.

The seminar produced by the professional development office had a large turnout. The large group may have prevented more introverted individuals from sharing responses with the group. Furthermore, the ambient room temperature during the seminar was above normal creating a somewhat uncomfortable environment and possibly inhibiting the participants’ interaction.
Implementation, Replication, and Improvement of the Plan

This plan is being improved upon and replicated in three ways. First a study is being conducted through a nationwide assessment of learner-centered approaches to teaching in colleges of agriculture as a part of a USDA Higher Education Challenge Grant. The grant includes a study of exemplars nationwide as well as a nationwide status survey of teaching in colleges of agriculture. The on-line status survey will be improved as a result of problems and concerns with the College of ACES survey that was conducted as a part of this project. Also, this study is an improvement of and replication of the PITA project because the results will be generalized to a nationwide as opposed to a college-wide population. Secondly, a graduate Master’s thesis is in process for the spring semester with all junior faculty members in the College of ACES to understand the unique problems faced by non-tenured faculty in regard to their teaching practice. This replication is an improvement of the current project because non-tenured faculty were not included in the original project. This replication gives voice and perspective to the unique needs of junior faculty members. A final link to improving this plan is to assess student perceptions of exemplary teaching. A second PITA project has been proposed to address student perceptions of teaching practice by exemplary teachers.

Outcomes, Discussion, and Recommendations

The outcomes and contributions of this project involved engaging faculty, academic professionals, and administrators to reflect upon and think about problems and skills associated with teaching. The impact of engaging faculty ranged from aspiring professors and new junior faculty in the Teaching College to faculty recognized for exemplary teaching in the College of ACES. Furthermore, potentially every teaching faculty and academic professional in the College of ACES was asked to self-assess their teaching abilities through the needs assessment survey. The results of faculty thinking about teaching and how to solve problems of teaching practice lead faculty to assess and reflect on their own teaching and interactions with students.

Faculty engaged in constructing strategies for teacher improvement through the various forms of reflection. Furthermore, this systematic, documented, and engaged reflection serves as a potential beginning for faculty members to reflect upon the impact of their teaching and document teaching in a scholarly fashion. Further, faculty development initiatives grounded in empirical evidence from faculty will hopefully lead to deeper reflective activities and greater acceptance by faculty to promote and enhance teaching in the College of ACES. Finally, recent constructivist learning theories indicate that when learners (in this case faculty members) are immersed in an educational environment that allows them to construct meaning from a process, (in this case teaching and learning) rather than being instructed into a process, the knowledge and skills learned are more meaningful, are retained longer, and transfer to real-life situations to a greater degree.